

WHAT IS CLAIMED IS:

1. A process for producing hexafluoropropylene oxide, which comprises contacting a reaction product containing hexafluoropropylene oxide obtained by reacting
5 hexafluoropropylene with oxygen, with at least one adsorbent selected from activated carbon and the following metal oxides, wherein the metal oxides are oxides of at least one metal selected from Groups 1 and 2 of the Periodic Table, Zr and Si.
- 10 2. The process according to Claim 1, wherein the activated carbon is activated carbon derived from a vegetable material.
3. The process according to Claim 1, wherein the metal oxides are oxides of at least one metal selected from Mg,
15 Ca, Zr and Si.
4. The process according to Claim 1, wherein the adsorbent is an adsorbent which does not substantially contain a transition metal oxide or aluminum oxide which acts as an isomerization catalyst for hexafluoropropylene
20 oxide.
5. The process according to Claim 1, wherein the adsorbent is an adsorbent having a specific surface area of at least $10 \text{ m}^2/\text{g}$.
6. The process according to Claim 1, wherein the
25 adsorbent is activated carbon having a specific surface area of at least $10 \text{ m}^2/\text{g}$.
7. The process according to Claim 1, wherein the

adsorbent is made of an oxide of at least one metal selected from Mg, Ca, Zr and Si and is a metal oxide having a specific surface area of at least $10 \text{ m}^2/\text{g}$.

8. The process according to Claim 1, wherein the
5 adsorbent is an adsorbent having adsorbed moisture preliminarily removed.

9. The process according to Claim 8, wherein the adsorbent having adsorbed moisture preliminarily removed, is an adsorbent having the moisture removed by feeding an
10 inert gas which contains substantially no moisture.

10. The process according to Claim 1, wherein the reaction product containing hexafluoropropylene oxide is contacted with the adsorbent in a gas phase.

11. The process according to Claim 1, wherein the
15 reaction product containing hexafluoropropylene oxide obtained by reacting hexafluoropropylene with oxygen, is subjected to at least one pretreatment selected from distillation, alkali washing and dehydration treatment by means of a dehydrating agent, and the reaction product
20 thus pretreated, is contacted with the adsorbent.

12. The process according to Claim 11; wherein the dehydrating agent is molecular sieves.

13. The process according to Claim 1, wherein the reaction product to be contacted with the adsorbent,
25 contains at least one of hexafluoroacetone, hydrogen fluoride and moisture in an amount of at least 300 vol ppm.

14. The process according to Claim 13, wherein the reaction product to be contacted with the adsorbent, contains impurities to be removed by the adsorbent, in an amount of at most 5 vol%.

5 15. The process according to Claim 1, wherein the reaction product to be contacted with the adsorbent, contains at least one of hexafluoroacetone, hydrogen fluoride and moisture in an amount of at least 500 vol ppm, and purified hexafluoropropylene oxide is
10 hexafluoropropylene oxide wherein the component in an amount of at least 500 vol ppm is not more than 100 vol ppm.

16. The process according to Claim 15, wherein the reaction product to be contacted with the adsorbent,
15 contains impurities to be removed by the adsorbent, in an amount of at most 2 vol%.

17. The process according to Claim 1, wherein purified hexafluoropropylene oxide is hexafluoropropylene oxide wherein the amount of moisture is at most 100 vol ppm,
20 the amount of hexafluoroacetone is at most 100 vol ppm, and the amount of hydrogen fluoride is at most 100 vol ppm.

18. The process according to Claim 17, wherein purified hexafluoropropylene oxide is hexafluoropropylene oxide
25 wherein the total amount of impurities is at most 200 vol ppm.

19. The process according to Claim 1, wherein purified

hexafluoropropylene oxide is hexafluoropropylene oxide wherein the amount of moisture is at most 20 vol ppm, the amount of hexafluoroacetone is at most 20 vol ppm, and the amount of hydrogen fluoride is at most 20 vol ppm.

5 20. The process according to Claim 19, wherein purified hexafluoropropylene oxide is hexafluoropropylene oxide wherein the total amount of impurities is at most 100 vol ppm.

21. The process according to Claim 11, wherein the
10 reaction product to be contacted with the adsorbent, contains at least one of hexafluoroacetone, hydrogen fluoride and moisture in an amount of at least 300 vol ppm.

22. The process according to Claim 21, wherein the
15 reaction product to be contacted with the adsorbent, contains impurities to be removed by the adsorbent, in an amount of at most 5 vol%.

23. The process according to Claim 11, wherein the reaction product to be contacted with the adsorbent,
20 contains at least one of hexafluoroacetone, hydrogen fluoride and moisture in an amount of at least 500 vol ppm, and purified hexafluoropropylene oxide is hexafluoropropylene oxide wherein the component in an amount of at least 500 vol ppm is not more than 100 vol
25 ppm.

24. The process according to Claim 23, wherein the reaction product to be contacted with the adsorbent,

contains impurities to be removed by the adsorbent, in an amount of at most 2 vol%.

25. The process according to Claim 11, wherein purified hexafluoropropylene oxide is hexafluoropropylene oxide
5 wherein the amount of moisture is at most 100 vol ppm, the amount of hexafluoroacetone is at most 100 vol ppm, and the amount of hydrogen fluoride is at most 100 vol ppm.

26. The process according to Claim 25, wherein purified
10 hexafluoropropylene oxide is hexafluoropropylene oxide wherein the total amount of impurities is at most 200 vol ppm.